

Scott Sikorski

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Education

University of Rochester, BS Computer Science

Conferred 2023

University of Virginia, MS Computer Science

Expected 2025

Work Experience

Northrop Grumman

Embedded Systems Engineer Intern

Summer 2024

- Dockerize main application in multiple containers for portable autonomous control
- Configure multiple user defined app settings for various local and container usage

Garmin

Summer 2022 & 2023

Embedded Systems Software Engineer Intern

- Agile development and maintenance of high-level software across shared C/C++ codebase
- Built new activities and improved existing activities by creating and linking core activity submodule logic to user experience
- Built unit image tests for page transition animations and native watch faces to verify UI

University of Rochester and UR LLE Energetics research group

June 2021 - May 2023

Parallel Processing & GPU Computation Research under Dr. Adam Sefkow

- Contributed to group's open-source parallel 3D particle-based physics simulation C++ framework
- Built [Quiet Direct Simulation](#) using CUDA for NVIDIA GPU for fast, low-noise fluid simulation

Projects

Reinforcement Learning for Mobile Robot Task and Motion Planning

Spring 2024

- Developed Double Deep Q-Network approach with PyTorch for complex sequential tasks
- Trained on multiple home mobile environment simulation with AI2THOR using custom state one-hot encoding for on robot resource constraints

Qiskit-Aer Qubit Gate Cancellation and Clustering Compiler Optimizations

Spring 2024

- Integrated quantum computer simulation optimization for static qubit basis analysis gate cancellation and clustering of qubits to prevent unnecessary CPU-GPU data exchanges
- Reduced gate amount and execution time for various benchmarks

Machine Independent Optimized C Compiler

Fall 2021 & Spring 2022

- Scanner and parser with syntax errors and semantic error recovery with AST generation in C++
- Optimized machine independent code generation with iterative dataflow analysis in Python

Leadership Experience

Cross Country/Track and Field Team Captain

Fall 2021, 2022, Spring 2023

Mobile App Development Teaching Assistant

Spring 2024

Software Analysis & Advanced Compilers Teaching Assistant

Spring 2023

Technical Tools & Other

Programming Languages: C++20, C11, CUDA-11, Python3, C#, Kotlin, Dart, Rust

Frameworks: Git, Jenkins, Flask, Flutter, .NET, PyTorch, TensorFlow, SQL/SQLite, Docker

Activate Secret Security Clearance granted May 2024